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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/670,212	09/26/2003	Kimio Nakayama	243095US0	6831

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EXAMINER

MATZEK, MATTHEW D

ART UNIT PAPER NUMBER

1771

DATE MAILED: 04/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/670,212

Applicant(s)

NAKAYAMA ET AL.

Examiner

Matthew D. Matzek

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 February 2006.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 13-15 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 and 16-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 12/22/2005.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Response to Amendment

1. The Amendment dated 2/6/2006 has been fully considered and entered into the Record. New claims 16-20 contain no new matter. Claims 1-20 are currently active, but claims 13-15 have been withdrawn from consideration. The rejection of claim 5 under 35 U.S.C. § 112, second paragraph has been withdrawn due to amendment.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 1 recites the incorporation of pigment A into the artificial leather, but allows for pigment at levels of 0-8% by mass. Therefore, the claimed article does not in fact require the use of Pigment A and Examiner has interpreted the claim in such a manner.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 2 and 4-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takeyama et al. (US 6,299,977) in view of Higuchi et al. (US 4,525,169) and further evidenced by Mast (US 4,914,764).

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- a. Takeyama et al. teach an artificial leather (Abstract), nonwoven fabric, comprising fiber bundles having a single fineness of no greater than 0.2 denier (0.222 dtex) (col. 3, lines 15-18). The nonwoven fabric is impregnated with polyurethane elastomer comprising a diisocyanate component (Applicant's polymer A with diisocyanate component) (col. 8, lines 25-43). Examiner equates the applied nonwoven fabric to the three-dimensional entangled body of Applicant. The polymer is impregnated in the range of 15-80% of the weight of the nonwoven fabric (col. 9, lines 10-14). This anticipates the ratio of the elastomeric polymer A to the three-dimensional entangled body in the limitation of claim 1. The surface of the artificial leather may contain naps of 40-300 microns, which anticipates the instantly claimed nap lengths (col. 11, lines 5-8). Example 2 is dyed via three different dyes, but Takeyama is silent as to the use of pigments and their quantities for use in coloring the artificial leather article.
- b. Higuchi et al. teach artificial grain leather having different color spot groups comprised of ultra fine fibers, in which at least one side of the fibrous substrate has two types of colors provided in a coating layer (Abstract). Resins for use in the coating layer comprise polyurethane (polymer A), polyacrylic acid (polymer B), and polyvinyl chloride (polymer C) (col. 5, lines 43-49). The colored coating layer is made of a coating composition in which resins are mixed with pigments. The pigments should not make up more than 30% by weight of the coating (col. 5, lines 59-64). As the pigments are to make up 30% or less of the weight of the coating of the article of Higuchi et al., the pigments necessarily meet the compositional limitations instantly claimed by Applicant. The article may also be impregnated with carbon black (col. 8, lines 58-60). Example 3

teaches the use of carbon black (Pigment A), insoluble azo and disazo condensation pigments (Pigments B and C) in a polyurethane vehicle for the coating film layer and a multitude of dyes for the creation of a dyed fabric.

c. Since Takeyama et al. and Higuchi et al. are from the same field of endeavor (i.e. artificial leather), the purpose disclosed by Higuchi et al. would have been recognized in the pertinent art of Takeyama et al.

d. The disclosure of Higuchi et al. is silent as to the size of the pigment particles. It is well known in the art of leather/artificial leather pigmentation that the particle sizes are within the instantly claimed ranges. This is demonstrated by Mast et al., which teaches that pigments for the use of coloring leather are from 0.050 to 0.5 microns (Abstract). The reference explicitly mentions carbon black and azo pigments (col. 1, lines 8-12 and col. 2, lines 39-43).

e. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to add pigments to elastomer of Takeyama et al. motivated by the desire to create artificial grain leather presenting an entirely new tint with quality appearance and having different color spot groups, which cannot be attained by natural leather (col. 1, lines 56-60).

f. The applied art in combination discloses the claimed invention except for the quantity of pigment to be present in the elastomer. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used the pigments at the instantly claimed levels, since it has been held that discovering an optimum value of a

result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

g. With regards to claim 6, although Takeyama et al. do not explicitly teach the instantly claimed feature of the elastomer's color fastness, it is reasonable to presume that said property is inherent to Takeyama et al. Support for said presumption is found in the use of like materials (i.e. polyurethane elastomer made from a diisocyanate). The burden is upon Applicant to prove otherwise. *In re Fitzgerald* 205 USPQ 594. In addition, the presently claimed property of the elastomer's color fastness would obviously have been present one the Takeyama et al. product is provided. Note *In re Best*, 195 USPQ at 433, footnote (CCPA 1977) as to the providing of this rejection made above under 35 USC 102. Reliance upon inherency is not improper even though rejection is based on Section 103 instead of Section 102. *In re Skoner*, et al. (CCPA) 186 USPQ 80.

h. Claim 7 is rejected as the size of the elastomeric polymer A particle can not serve as a further limitation in the instantly claimed article as the elastomer melts and impregnates the nonwoven fabric and therefore loses its particle form in the fabricated article.

i. Claim 9 is rejected as the invention of Higuchi et al. teaches the use of pigments in the coating layer (col. 5, lines 59-64) and Takeyama et al. teach the addition of a surface layer comprising elastomeric polymer, which is either the same kind or different kind from the impregnation polymer on the base material (nonwoven, napped fabric) (col. 21, lines 13-18). This results in a grained surface (col. 21, lines 13-15) rejecting claim 12. Claim 11 is rejected as Figure 3 illustrates a discontinuous surface coating resulting

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in a semi-grained article. Claim 10 is rejected as Higuchi et al. teach that the artificial leather article may be made of a laminate comprising woven, nonwoven and knitted fabrics (Claim 8).

4. Claims 3, 16, 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takeyama et al. (US 6,299,977) in view of Higuchi et al. (US 4525,169) and further evidenced by Mast (US 4,914,764) as applied above to claim 1 and in further view of Ashida et al. (JP 09059881). The references of Takeyama et al., Higuchi et al. and Mast are silent as to the use of organic or carbon black being embedded into superfine fibers for use in artificial leather. For purposes of this rejection only the Abstract of the JP reference will be relied upon. A full translation will be provided in the next Office Action.

a. Ashida et al. teach the creation of suede-tone artificial leather comprising fiber bundles containing a black pigment reflecting infrared rays. The fiber bundles are made of conjugate ultra-fine polyethylene or nylon fibers containing perylene black (an organic black pigment) in an amount of greater than or equal to 5 percent. A nonwoven web of the fiber bundles is impregnated with a polyurethane ratio of 70:30.

b. Since Ashida et al. and Takeyama et al. are from the same field of endeavor (i.e. artificial leather), the purpose disclosed by Ashida et al. would have been recognized in the pertinent art of Takeyama et al.

c. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to have made the fibers of Takeyama et al. with the pigment and percentages disclosed by Ashida et al. The skilled artisan would have been motivated by

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the desire to create an article that is capable of reflecting infrared rays (Abstract, Ashida et al.).

5. Claims 3 and 16-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takeyama et al. (US 6,299,977) in view of Higuchi et al. (US 4,525,169) and further evidenced by Mast (US 4,914,764) as applied above to claim 1 and in further view of Yoneda et al. (JP 09059882). The references of Takeyama et al., Higuchi et al. and Mast are silent as to the use of organic or carbon black being embedded into superfine fibers for use in artificial leather. For purposes of this rejection only the Abstract of the JP reference will be relied upon. A full translation will be provided in the next Office Action.

a. Yoneda et al. teach the creation of suede-tone artificial leather comprising fiber bundles containing a black pigment reflecting infrared rays. The fiber bundles are made of conjugate ultra-fine polyethylene or nylon fibers containing carbon black in an amount of 0.1-5%.

b. Since Yoneda et al. and Takeyama et al. are from the same field of endeavor (i.e. artificial leather), the purpose disclosed by Yoneda et al. would have been recognized in the pertinent art of Takeyama et al.

c. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to have made the fibers of Takeyama et al. with the pigment and percentages disclosed by Yoneda et al. The skilled artisan would have been motivated by the desire to create an article that is capable of reflecting infrared rays (Abstract, Yoneda et al.).

Response to Arguments

6. Applicant's arguments filed 2/6/2006 have been fully considered but they are not persuasive.

7. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., the grain surface and the fiber surface have different functions and require different properties and as such Higuchi et al. adds nothing to the inventive concept of the fibrous substrate) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). The instant claims only require the use of the elastomer but is not specific as to its location within the claimed article.

8. Applicant argues that Higuchi et al. only teaches the dyeing of the fibrous substrate and as such suffers from similar deficiencies as Takeyama et al. with regard to a lack of disclosure of embedding the pigments in the fiber and the elastomeric polymer. This is a moot argument, as only claims 3 and 16-20 actually require the embedding of pigments into the fibers. The limitation of "pigment A in an amount of 0 to 8%" does not require the presence of pigment A. It is therefore optional and need not be present in the applied prior art.

9. Applicant argues that one of ordinary skill in the art would not have combined Example 2 of Takeyama et al. and Higuchi et al. because they are directed to two different types of artificial leather: nubuck and grain. The teaching that has been relied upon from the Higuchi et al. reference and incorporated into the Takeyama et al. reference is the use of pigments to dye the Takeyama; not the style or texture of the artificial leather. Therefore, one of ordinary skill in the

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art at the time the invention was made would have looked to the Higuchi et al. reference for guidance as to means of pigmenting artificial leather.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew D. Matzek whose telephone number is (571) 272-2423.

The examiner can normally be reached on 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (571) 272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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